1908

Family Heterocongridae

Body very long, subcylindrical. Tail compressed, nearly twice or more than twice head and trunk. Snout obtuse, very short. Mouth cleft small, oblique, reaches front eye edge. Lower jaw protrudes. Tongue free. Teeth in jaws and on vomer small, acicular, in narrow bands, continuous with premaxillary. Front nostril very small and concealed, hind nostril slit near eye. Gill opening lateral narrow slit. Body scaleless. Lateral line present. Dorsal, anal and caudal confluent. No pectoral. Vent far behind gill opening.

Lutjanus sebae Bleeker, Nederl. Tijds. dierk., vol. 2, 1865, p. 173 (Siam); Atlas Ichth. Ind. Néerl., vol. 8, 1876-77, p. 62, pl. (72) 350, fig. 2 (Sumatra, Singapore, Biliton, Java, Bali, Celebes, Batjan, Amboina, Waigiu, New Guinea). — Day, Fauna British India, Fishes, vol. 1, 1889, p. 465. — Weber, Siboga Exped., vol. 57, Fische, 1913, p. 254 (Bawean). — Fowler and Bean, Proc. U. S. Nat. Mus., vol. 62, 1922, p. 31 (Zamboanga). — Fowler, New Bishop Mus., vol. 10, 1928, p. 198 (compiled). Lutianus sebae Day, Fishes of India, pt. 1, 1875, p. 30, pl. 7, fig. 3 (Madras). — Alleyne and Macleay, Proc. Linn. Soc. New South Wales, vol. 1, 1877, p. (Percy Islands, Queensland). — Fowler, Journ. Acad. Nat. Sci. Philadelphia, series 2, vol. 12, 1904, p. 527 (Padang). — Barnard, Annals South African Mus., vol. 21, pt. 2,

1909

Analysis of genera

a.¹ Pectorals absent. Heteroconger.

a.² Pectorals present. Taeniaconger.

1910

Genus Heterocongor Bleeker

Heterocongor Bleeker, Verslag. Kon. Med. Akad. Wet. Amsterdam, vol. 2, 1868, p. 331. Type Heterocongor polygona Bleeker, monotypic.

Body long, subcylindrical. Head small. Snout short. Eye large, well advanced. Mouth oblique, terminally superior. Teeth small, conic, subequal, numerous, in several rows in jaws and on vomer, band on latter narrowing posteriorly. Gill opening lateral, largely within lower half of body depth. Dorsal begins rather close behind gill opening. No pectoral. Body with numerous dark transverse bands.

1911

Heterocongor polyzona Bleeker

Heterocongor polyzona Bleeker, Verslag. Kon. Med. Akad. Wet. Amsterdam, vol. 2, 1868, p. 332, pl. Amboyna. — Günther, Cat. Fishes Brit. Mus., vol. 8, 1870, p. 44 (type). — Weber and Beaufort, Fishes Indo Austral. Archipelago, vol. 3, 1916, p. 272 (type).

1912

Genus Taeniocanger Herre

Taeniocanger Herre, Philippine Journ. Sci., vol. 23, No. 2, Aug. 1923, p. 152. Type Taeniocanger chapmani Herre, monotypic.

Body greatly elongate, slender, subcylindrical, tail greatly compressed. Head small short. Snout short, blunt, obtuse. Eye large, well advanced. Mouth superiorly terminal, oblique. Teeth very small, pointed, subequal, close set, in bands in jaws and on vomer. Nostrils in front of eyes, about level with their upper edge. Gill opening nearer back than belly, greater than pectorals. Dorsal begins close behind gill openings, confluent with other vertical fins around end of long tail. Pectoral minute, close behind gill opening. Coloration uniform.

1913

"Taeniocongar chapmani" Herre

Taeniocongar chapmani Herre, Philippine Journ. Sci., vol. 23, no. 2, 1923, p. 152, pl. 3. Dumaguete, Oriental Negros.

1914

Family Xenocongridae

Body elongated. Snout short. Eye advanced. Branchial clefts with small pharyngeal apertures. Frontals paired; palato-pterygoids formed as elongate laminae; caudal vertebrae without lateral processes. No scales. Dorsal and anal confluent with caudal. No pectorals.

Differs from the Muraenidae in the small pharyngeal apertures of the branchial clefts, also absence of scales and pectoral fins.

Analysis of genera

a.[1] Upper teeth biserial, lower quadriserial; tail twice length of rest of fish. Xenocongr.

a.[2] Upper and lower teeth uniserial; tail slightly longer than rest of fish. Endecongr.

1915

Genus Xenocongor Regan

Xenocongor Regan, Trans. Linn. Soc. London, vol. 15, Sep. 1912, p. 301. Type Xenocongor fryeri Regan, monotypic.

Body elongate. Snout broad, flat. Eye small. Mouth terminal, moderately wide. Maxillary ends just behind eye, not reaching mouth angle. Teeth pointed, conic or slightly compressed, biserial on maxillary, form broad bands in lower jaw. Vomer with rounded patch of teeth continued backwards as pair of curved bands, each of smaller outer and larger inner series. Tongue not free. Nostrils lateral, anterior

with short tube. No scales. 1916
Dorsal and anal well developed,
confluent with reduced caudal.
No paired fins.

One species. Said to be nearest
Nettastoma but differing widely
in its short snout and restricted
inner branchial apertures.

1917

Xenocongor fryeri Regan

Xenocongor fryeri Regan, Trans. Linn. Soc. London, vol. 15, Sep. 1912, p. 301. Assumption Island, Indian Ocean. — Norman, Ann. Mag. Nat. Hist., ser. 9, vol. 10, Aug. 1922, p. 218, fig. a (dentition).

Tail nearly twice long as rest of fish; head 2 1/2 to vent, wide as deep, depth less than 1/3 its length. Snout rounded anteriorly, slightly broader than long, length nearly 4 in head, 3 times eye; jaws equal; mouth cleft horizontal, extends eye diameter behind eye; front nostril near snout tip, hind one before lower part of eye.

1918

Dorsal origin 3/4 head length behind head.

Brownish, spotted or marbled with blackish. Length 400 mm.

(Regan.)

Assumption Island.

1919

Genus Endeconger Jordan

Endeconger Jordan, (Classification of Fishes) Stanford Univ. Pub., Biol. Sci., vol. 3, no. 2, 1923, p. 131. Type Brachyconger platyrhynchus Norman, virtually as Endeconger Jordan proposed to replace Brachyconger Norman (misquoted "Brachyconger Regan 1922").

Brachyconger (not) Norman, Ann. Mag. Nat. Hist., ser. 9, vol. 10, Aug. 1922, p. 217. Type Brachyconger platyrhynchus Norman, monotypic.

Tail short. Teeth in jaws, except at front of upper, uniserial. Hind nostril labial.

1920

Endecenger platyrhynchus (Norman)

Brachycenger platyrhynchus Norman,
Ann. Mag. Nat. Hist., ser. 9, vol. 10, aug. 1, 1922,
p. 218, fig. b (teeth). New Britain. —
Fowler, Mem. Bishop Mus., vol. 10, 1928,
p. 39 (copied).

→ Endecenger platyrhynchus Fowler, Mem.
Bishop Mus., vol. 11, No. 5, 1931, p. 316
(reference).

Tail slightly longer than rest of
fish; head 2 2/5 to vent, little broader
than deep. Snout nearly 6 in head,
slightly more than eye diameter,
broad, flat, rounded anteriorly; jaws
equal, mouth cleft horizontal, reach

1924

below hind eye border; teeth in jaws and on vomer uniserial except 2 or 3 irregular series at front of upper jaw; front nostril almost at snout end, hind one just before vertical of front eye edge.

Dorsal and anal well developed, former begins at space from gill opening 2/7 of head length.

Brownish, paler below. Caudal with very narrow pale margin: Length 130 mm. (Norman.)

New Britain.

1922

Family Pettastomidae

Body elongate, more or less compressed. Tail ends in slender tip or filament. Snout elongate, pointed, upper jaw longer. Bands of cardiform recurved teeth in jaws and on vomer, last not separated from pre maxillary. Tongue not free. Nostrils superior or lateral, anterior tubular and not far from snout tip, slit like posterior above or just before eye. Gill opening small or moderate, partly inferior and separate. Gill slits within pharynx wide. Lateral line present. Vent far behind gill opening, premedian. Dorsal, anal and caudal confluent. No

on palatines and tongue smooth; interorbital 3 7/8 to 5 4/5, slightly convex, with broad median keel to occiput; preopercle edge serrated, with shallow notch below receiving small interopercle knob; about 7/8 fine denticles along hind preopercle edge and larger around corner. Gill rakers 6+12, compressed, lanceolate, equal gill filaments or little less than eye.

Scales 45 to 49 in lateral line to caudal base and 6 or 7 more on latter; 10 or 11 scales above lateral line, 19 or 20 below, 12 predorsal forward to occiput, 6 rows on cheeks to preopercle ridge. Scales with 12 or 13 basal radiating striae; apical denticles 50 to 60, with 4 or 5 transverse series of basal elements; circuli fine.

pectoral.

Bathypelagic eels with fragile bodies of tropical and warm seas. As some species change with age Facciolá has proposed Nettastomella[1] as a group name for chiefly Mediterranean forms.

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[1] Bull. Soc. Zool. Ital. Roma, ser. 3, vol. 3, fasc. 1-4, 1914, p. 47.

1924

Analysis of genera

a.' Rettastominae. Nostrils superior, posterior above and before eye, anterior at tip of bony portion of snout.

b.' Snout not ending in fleshy proboscis; front nostrils near snout tip.

c.' Hind nostril before eye on level with its upper front edge.
Rettastoma.

c.² Hind nostrils begin above middle of eye in interorbital and extend backward, converging toward middle line.
Metopomycter.

b.² Snout with long slender fleshy tip or proboscis, at base of which front nostrils.
Venefica.

a.² Chlopsinae. Nostrils lateral, posterior slit like and placed just in front of eye; snout without fleshy tip.
Chlopsis.

1925

Genus Hettastoma Rafinesque

Hettastoma Rafinesque, Carr. Innov. Piant. Animal. Sicil., 1810, p. 66. Type Hettastoma melanura Rafinesque, monotypic.

Hyoprorus Kölliker, Verh. Phys. Med. Gesell. Würzburg, vol. 4, 1883, p. 101. Type Hyoprorus messinensis Kölliker, monotypic. (Larva.)

Snout much produced, depressed, without fleshy proboscis. Median vomerine teeth somewhat larger than others. Nostrils nearly superior, anterior at bony portion of snout tip, posterior above and before eye. Gill openings

1926

moderate. No pyloric appendages. Air vessel present. Head with numerous mucous pores. Dorsal low, begins nearly over gill opening.

1927

Nettastoma melanura Rafinesque

Nettastoma melanura Rafinesque, Carr. Nuov. Piant. Animal. Sicil., 1810, p. 66, pl. 16, fig. 1. Sicily. — Desmarest, Nouv. Dict. Hist. Nat., vol. 22, 1818, p. 585 (reference). — Swainson, Nat. Hist. Animals, vol. 2, 1839, p. 335 (reference). — Bonaparte, Cat. Metod. Pesc. Europ., 1846, p. 39 (Mediterranean). — Kaup, Archiv Naturg., 1856, pt. 1, p. 75 (compiled); Cat. Apodal Fish Brit. Mus., 1856, p. 119, pl. 15, fig. 75 (head) (compiled). — Roule, Rés. Camp. Sci. Monaco, vol. 52, 1919, p. 96 (6 miles off São Miguel, 950 meters, 3 miles off Fayal, 950 meters).

1928

Nettastoma melanurum Günther, Cat. Fishes Brit. Mus., vol. 8, 1870, p. 48 (Nice), Rep. Voy. Challenger, vol. 22, 1887, p. 253 (reference). — Vaillant, Exped. Sci. Travailleur et Talisman, Poiss., 1888, p. 83, pl. 5, figs. 2, a-b (coast of Soudan, 640 meters; Cape Verde Islands, 90 to 760 meters). — Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1888 (1892), p. 651 (compiled). — Goode and Bean, Oceanic Ichth., 1895, pp. 149, 517 (compiled).

Muraenophis saga Risso, Ichth. Nice, 1810, p. 370, pl. 10, fig. 39. Nice.

Hyoprorus messinensis Kölliker, Verh. Phys. Med. Gesell. Würzburg, vol. 4,

1929

1854, p. 101. Messina. (Larvae). — Vaillant, Exped. Sci. Travailleur et Talisman, Paris., 1888, p. 95 (coasts of Morocco, 550 meters).

Nettastoma brevirostre Facciolá, Natural. Sicilia., vol. 6, 1887, p. 166, pl. 3, fig. 3.

1930

Genus Metopomycter Gilbert

Metopomycter Gilbert, Bull. U. S.
Fish Comm., vol. 23, pt. 2, 1903 (1905),
p. 585. Type Metopomycter
denticulatus Gilbert, monotypic.

Body slender, with tapering moderately
long tail. Head rather large. Muzzle
long, depressed. Eye moderate, little
advanced. Mouth cleft long, reaches hind eye edge.
Teeth very small. No
tongue. Front nostril superior near
snout end, large round opening directed
forward, in very short tube; hind
nostril long slit beginning above middle
of eye in interorbital space and
pair converging backward. Gill

opening rather small. Lateral line axial. Dorsal begins little before gill opening, rather high, confluent with moderate caudal and lower anal. No pectoral.

Analysis of species

a.' Head 2 4/5 to vent; hind eye edge well before middle of head. denticulatus.

a.² Head 3 ½ to vent; hind eye edge midway in head. pdruiceps.

1932

Metopomycter denticulatus Gilbert

Metopomycter denticulatus Gilbert,
Bull. U. S. Fish Comm., vol. 23, pt. 2,
1903 (1905), p. 585, fig. 233. Near Kauai,
409 to 550 fathoms. — Fowler, Mem.
Bishop Mus., vol. 10, 1928, p. 40 (type).

Metopomycter

~~Nettastoma~~ parviceps (Günther) 1933

Nettastoma parviceps Günther, Ann. Mag. Nat. Hist., ser. 4, vol. 20, 1877, p. 446. South of Yedo, Japan; Rep. Voy. Challenger, vol. 22, 1887, p. 253, pl. 63, fig. A (type). — Goode and Bean, Oceanic Ichth., 1895, p. 148 (reference). — Barnard, Ann. South African Mus., vol. 21, pt. 1, June 1925, p. 194 (off East London and eastern declivity Agulhas Banks, 33 to 400 fathoms).

1934

Genus Venefica Jordan and Davis

Venefica Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1888 (1891), p. 651. Type Venefica procerum Goode and Bean, orthotypic.

Body very elongate, compressed. Head moderate, conic, somewhat depressed. Snout prolonged into slender fleshy flap. Eyes covered by skin. Bands of cardiform teeth in jaws and on vomer. No lips. Tongue not free. Front nostrils in tubes near top of snout, behind base of flap. Hind nostrils at upper part of front eye edge. Gill openings small, partly

1935

inferior, separated by rather wide interspace. Pores in course of sensory canals of head well developed. Lateral line well developed, with numerous pores uniserial. Dorsal origin above or somewhat before gill opening. Vertical fins confluent. No pectoral. Vent far back, premedian.

Bathypelagic in tropical or warm seas.

1936

Analysis of species

a.' Proboscis 2 2/3 in snout, eye 6 1/4 in firm portion of snout. procera.

a.'' Proboscis 1 2/5 in snout, eye 9 in firm portion of snout. ocella.

a.^{3} Proboscis 1 1/2 in snout, eye 7 2/3 in firm portion of snout. proboscidea.

a.^{4} Proboscis 2 in snout, eye 7 in firm portion of snout. tentaculata.

1937

Venefica procera (Goode and Bean)
Bettastoma procerum Goode and Bean,
Bull. Mus. Comp. Zool., vol. 10, 1882, p.
224. N. 33°35', W. 76°, 178 to 647 fathoms, to 34°
Gulf Stream off North Carolina. —
Günther, Rep. Voy. Challenger, vol. 22, 1887,
p. 253 (compiled).
Venefica procera Jordan and Davis, Rep.
U. S. Fish Comm., pt. 16, 1888 (1891), p. 651
(compiled). — Goode and Bean, Oceanic
Ichth., 1895, p. 149, pl. 44, fig. 168 (type,
Station 327). — Jordan and Evermann,
Bull. U. S. Nat. Mus., No. 47, pt. 1, 1896, p.
365 (copied; off San Pedro, California).
— Weber, Siboga Exp[illegible]., vol. 57, Fische,

1938

1913, p. 45, pl. 5, fig. 4 (N. 00° 34'.6 E. 119° 39'.8, 1301 meters, Celebes Sea). — Weber and Beaufort, Fishes Indo Austral. Archipelago, vol. 3, 1916, p. 271, figs. 118-119 (Celebes specimen).

Depth 7 in head; head 3 1/8 to vent, width 7 3/4 in its length; combined head and trunk equals broken tail. Snout 1 7/8 in head; proboscis to mandible 1 ~~firm snout~~ end 2 1/2 in snout; eye 10 in head from firm end of snout, 6 in snout, greatly exceeds narrow interorbital; maxillary reaches opposite hind eye edge, length from firm snout end 1 4/5 in head; teeth

1939

in villiform bands in jaws; interorbital 2 in eye, slightly convex. Gill opening about long as eye, much greater than interspace.

Lateral line distinct.

Dorsal origin little before gill opening, fin height 6 in head; anal lower, fin height 8 3/4.

Brown. Iris grayish.

Gulf Stream, off California, Celebes Sea, Philippines. The above account from my largest example, though minus end of tail.

1940

D. 5187. Apo Island, S. 21° W., 12.50 miles (N. 9° 16' 45" E. 123° 21' 15"), Tanon Strait, east coast of Negros. In 225 fathoms. March 31, 1908. Length 91 mm., poor, tail end damaged.

D. 5269. Matocot Point, S., 54° E., 3 miles (N. 13° 39' 50" E. 120° 59' 30"), Verde Island Passage and Batangas Bay. In 220 fathoms. June 8, 1909. Length 128 to 157 mm. 2 examples, poor.

D. 5349. Point Tabonan, N. 85° E., 45.2 miles (N. 10° 54' E. 118° 26' 20"), Palawan Passage. In 730 fathoms. December 27, 1908. Length 315+ mm. to end of broken tail.

1941

Venefica ocella (Garman)

Venefica ocella Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 318, pl. 61, fig. 2. N. 5°30' W. 86°45', 1067 fathoms.

1942

Venefica proboscidea (Vaillant)

Lettastoma proboscidea Vaillant, Exped. Sci. Travailleur et Talisman, Poiss., 1888, p. 84, pl. 7, fig. 3. Off Morocco, 2200 meters.

Venefica proboscidea Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1888 (1892), p. 652 (compiled). — Goode and Bean, Oceanic Ichth., 1895, p. 150 (compiled). — Barnard, Ann. South African Mus., vol. 21, pt. 1, 1925, p. 194 (off Cape Point, 660 fathoms).

1943

Venefica tentaculata (Garman)

Venefica tentaculata Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 319, pl. M., fig. 2. N. 5° to 16° W. 86° to 99°, 660 to 978 fathoms, Gulf of Panama.

1944

Genus Chlopsis Rafinesque

Chlopsis Rafinesque, Ind. Itt. Sicil., 1810, pp. 42, 58. Type Chlopsis bicolor Rafinesque, monotypic.

Laurenchelys Peters, Monatsb. Akad. Wiss. Berlin, 1864, p. 397. Type Laurenchelys cancrivora Peters.

Gavialiceps Wood Mason and Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 4, 1889, p. 460. Type Gavialiceps taeniola Wood Mason and Alcock, designated by Jordan, Genera of Fishes, pt. 4, 1920, p. 444.

1945

Body long, slender, fragile, compressed, with long tapering tail. Head long, tapering. Snout elongate, conical. Eye small, little advanced. Mouth cleft long, with slender mandible little shorter than snout. Teeth small, sharp, in bands in jaws and on vomer. Tongue short, tip free. Nostrils lateral, posterior slit like and before eye. Gill openings moderate, close together. Lateral line axial. Vertical fins confluent, dorsal beginning above gill opening. No pectoral.

1946

Analysis of species

a.' Head shorter than trunk.

b.' Head 2 2/3 to 2 3/4 to vent.

c.' Head 2 3/4 to vent; eye 5 in snout; vertical fins dark. taeniola.

c.² Head 2 2/3 to vent; eye 3 1/2 in snout; vertical fins transparent. equatorialis.

b.² Head 2 1/5 to 2 1/3 to vent.

d.' Eye 3 in snout.

e.' Vertical fins with black edge posteriorly. bicolor.

e.² Coloration pale. petersi.

d.² Eye 3 3/4 in snout; tip of caudal black. fierasfer.

d.³ Eye 4 in snout; color pale. gilberti.

1947

a.² Head little longer than trunk, 5 to 5 1/5 in total; eye 3 1/3 in snout; grayish, head, thorax and abdomen black.

hasta.

1948

Chlopsis taeniola (Wood Mason and Alcock)

Gavialiceps taeniola Wood Mason and Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 4, 1889, p. 460. N. 19°35'E. 92°24'; 272 fathoms, Bay of Bengal; Andaman Sea 7 miles S.E. by S. of Ross Island, 265 fathoms. — Goode and Bean, Oceanic Ichth., 1895, p. 517 (note).

Uetlastoma taeniola Alcock; Ann. Mag. Nat. Hist., ser. 6, vol. 8, 1891, p. 135 (stations 120, 240 to 276 fathoms); ser. 6, vol. 10, 1892, p. 364 (note); Journ. Asiatic Soc. Bengal, vol. 35, pt. 2, 1896, p. 338 (compiled).

1949

Lauvenchelys taeniola Alcock, Cat. Deep Sea Fishes Indian Mus., 1899, p. 206 (Andaman Sea and Bay of Bengal, 240 to 281 fathoms); Illustrat. Zool. Investigator, pt. 7, 1900, pl. 34, fig. 2.

Depth 34 1/3 to 37 to caudal base, 3 2/3 to 5 1/4 in head; head 8 1/2 to 9 to caudal base, 2 3/4 to 3 1/3 to vent; combined head and trunk 1 3/4 to 2 in tail to caudal base; head width 7 to 8 in its length. Snout 2 1/2 to 3 1/3 in head; eye 11 to 12, 3 3/4 to 5 3/4 in snout, little greater than interorbital in young to 1 1/4 in interorbital with age; ~~interorbital 14 1/2 to 15 1/2~~.

1950

mouth cleft reaches 1/2 to 3/4 an
eye diameter beyond eye, length
2 to 2 2/3 in head; teeth slender,
sharp, conic, in bands in jaws, each
with median enlarged series above,
and similar inner enlarged series
below; premaxillary teeth external
on lower surface of protruded snout,
set off from maxillary teeth and
before closed mandible tip; single
row of 8 to 10 large wide spaced
teeth down shaft of vomer;
interorbital low, depressed, width

1951

14 1/2 to 15 1/2. Gill opening equals eye, interspace barely 1/4.

Lateral line distinct.

Dorsal begins over gill opening, fin height 4 1/2 in head; anal lower, fin height 5 1/2; caudal 3 to 4.

Dark brown, nearly uniform. Young examples often pale. Iris gray. Inside gill opening blackish. Vertical fins often dusky to blackish brown.

Andaman Sea, Bay of Bengal, East Indies, Philippines.

1952

D.5387. Bagatao Island Light (outer), S. 80° E., 27 miles (N. 12° 54' 40" E. 123° 20' 30"), between Burias and Luzon. In 209 fathoms. March 11, 1909. Length 170 mm.

10176, 10177. D.5527. Balicasag Island (C.), N. 14° W., 8.2 miles (N. 9° 22' 30" E. 123° 42' 40"), between Siquijor and Bohol. In 392 fathoms. August 11, 1909. Length 517 to 638 mm.

4122. D.5365. Cape Santiago Light, N. 73° W., 6.7 miles (N. 13° 44' 24" E. 120° 45' 30"), Balayan Bay, Luzon. In 214 fathoms. February 22, 1909. Length 326 mm.

4334. D. 5567. Dammi Island (N.), N. 81° W., 9 miles (N. 5° 48' E. 120° 33' 45"), north of Tawi Tawi. In 268 fathoms. September 21, 1909. Length 365 mm.

4142. D.5620. Makyan Island (S.), S. 44° E., 7 miles (N. 0° 21' 30" E. 127° 16' 45"), Molucca Passage. In 358 fathoms. November 28, 1909. Length 588 mm.

D.5280. Malavatuan Island (N.), S. 60° W., 6.10 miles (N. 13° 55' 20" E. 120° 25' 55"), China Sea vicinity southern Luzon. In 193 fathoms. July 17, 1908. Length 220 mm.

D.5268. Matocot Point, S., 50° E., 5.80 miles (N. 13° 42' E. 120° 57' 15"), off eastern Mindoro. In 170 fathoms. June 8, 1908 Length 170 to 190 mm. 3 examples.

6602. D.5289. Matocot Point, S. 42° E., 5 miles (N. 13° 41' 50" E. 120° 58' 30"), China Sea vicinity southern Luzon. In 172 fathoms. July 22, 1908. Length 188? to 720 mm. 4 examples.

D.5267. Matocot Point, S., 39° E., 5.50 miles (N. 13° 42' 20" E. 120° 58' 25"), off eastern Mindoro. In 170 fathoms. June 8, 1908. Length 185 mm.

1954

D. 5297. Matocot Point, S. 50° E., 5.10 miles (N. 13° 41' 20" E. 120° 58'), China Sea vicinity southern Luzon. In 198 fathoms. July 24, 1908. Length 218 mm.

2583. D. 5395. Panalangan Point, Talajit Island., S. 81° E., 2.19 miles (N. 11° 56' 40" E. 124° 14'), between Samar and Masbate. In 140 fathoms. March 15, 1909. Length 296 mm.

8381. D. 5405. Ponson Island (N.), S. 86° E., 8.5 miles (N. 10° 49' 20" E. 124° 24' 23"), Dupon Bay, Leyte and vicinity. In 262 fathoms. March 17, 1909. Length 617 mm.

3373, 8382. D. 5406. Ponson Island (N.), S. 88° E., 10.2 miles (N. 10° 49' 3" E. 124° 22' 30"), Dupon Bay, Leyte and vicinity. In 298 fathoms. March 17, 1909. Length 730 to 775 mm.

4703. D. 5111. Sombrero Island, S. 41° E., 4.50 miles (N. 13° 45' 15" E. 120° 46' 30"), China Sea off southern Luzon. In 236 fathoms. January 16, 1908. Length 494 mm.

1955

D. 5116. Sombrero Island, N. 69° E., 2.50 miles (N. 13° 41' E. 120° 47' 5"), Balayan Bay and Verde Island Passage. In 200 fathoms. January 20, 1908. Length 290 mm.

1956

Chlopsis equatorialis Gilbert

Chlopsis equatorialis Gilbert, Proc. U.S. Nat. Mus., vol. 14, 1891, p. 347. S. 1° W. 81°, 401 fathoms, off Ecuador. — Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1888 (1892), p. 651 (copied). — Goode and Bean, Oceanic Ichth., 1895, p. 150 (reference). — Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47, pt. 1, 1896, p. 364 (copied).

1957

Chlopsis bicolor Rafinesque

Chlopsis bicolor Rafinesque, Ind. Itt. Sicil., 1810; pp. 42, 59, pl. 2, fig. 1. Sicily. — Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1888 (1892), p. 650 (note). — Goode and Bean, Oceanic Ichth., 1895, p. 150 (remarks).

Laurenchelys cancrivora Peters, Monatsb. Akad. Wiss. Berlin, 1864, p. 397. Mediterranean. — Günther, Cat. Fishes Brit. Mus., vol. 8, 1870, p. 48 (compiled).

1958

Chlopsis petersi (Day)

Lawrenchelys petersi Day, Fishes of India, pt. 4, 1878, p. 663, pl. 168, fig. 6. Orissa, Fauna British India, Fishes, vol. 1, 1889, p. 92, fig. 39 (copied).

1959

Chlopsis fierasfer Jordan and Snyder

Chlopsis fierasfer Jordan and Snyder,
Proc. U. S. Nat. Mus., vol. 23, 1901, p. 860,
fig. 10. Wakanoura, Japan.

1960

Chlopsis gilberti Garman

Chlopsis gilberti Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 316, pl. 52, fig. 2. N. 7°21' W. 79°35', 511 fathoms, off Panama.

1961

Chlopsis hasta (Zugmayer)

Gavialiceps hasta Zugmayer, Bull. Inst. Océanogr. Monaco, No. 193, Jan. 20, 1911, p. 7. N. 36°14' W. 8°, 1400 meters, off Portugal; Rés. Camp. Sci. Monaco, vol. 35, 1911, p. 86 (type).

1962

Family Hemichthyidae

Body excessively slender, more or less compressed, deepest medially, tapers back to usually long and slender filiform tail, forward to very long slender neck, abruptly enlarged at head. Head small, short, rather wide, top depressed. Snout protruded, extremely slender, nearly needle like, upper jaw longer. Eye moderate. Mandible slender like upper jaw. Mouth cleft extends behind eye. Jaws and vomer with close set teeth, points sometimes directed backward. Tongue not free. Nostrils large, close together before eye, without tube or flap. Gill opening

(Honolulu).

Rooseveltia aloha Jordan and Snyder, op. cit., vol. 26, 1906 (1907), p. 212, fig. 3. Honolulu.

Depth 2 2/3 to 2 3/4; head 2 3/4 to 2 4/5, width 2 1/5 to 2 1/4. Snout 3 to 3 1/10 in head from snout tip; eye 3 2/5 to 4 1/8, 1 1/4 to 1 1/2 in snout, greater than interorbital or 1 1/10 in interorbital with age; maxillary reaches 2/5 in eye, expansion 2 to 2 1/4 in eye, length 2 1/4 to 2 1/3 in head from snout tip; teeth fine, in bands in jaws, outer row little enlarged but not as prominent canines; band of small teeth across vomer and on each palatine; interorbital 4 to 4 1/2, convex; preopercle edge minutely denticulate. Gill rakers 7 to 12, of which 5 above and 3

1963

large, separated by narrow isthmus or partly confluent. Branchial openings in pharynx wide slits. Suspensorium vertical. Vertebrae numerous. No scales. Lateral line with or without pores. Dorsal and anal long, confluent with reduced caudal or extend to end of filamentous tail. Pectoral small, well developed. Vent near gill openings or more posterior.

Singular bathypelagic eels, of warm and temperate seas.

1967

Analysis of genera

a'. Pectorals present.

b'. Body greatly elongate, depth 20; gill opening long, lateral; mouth not extending behind hind eye edge; dorsal and anal begins in anterior part of trunk.

c'. Snout snipe-like beaks, jaws long, arched and slender, compresse greater part of head, abruptly contracted before eyes; teeth fall minutely fine; pectoral well developed; gill openings clearly separated at throat.

d'. Hemichthyinae. Caudal with filament; dorsal begins on head; vent below pectorals.

e'. Lateral line in 3 rows of small pores disposed in quincunx.

Hemichthys

e'.[2] Lateral line without pores.

1965

f.[1] Teeth blunt. Hematopora

f.[2] Teeth pointed. Cercomitus

d.[2] Labichthyinae. Caudal without filament; lateral line with 1 row of large pores; dorsal begins above or behind pectorals.

f.[1] Vent far behind pectorals. Avocettina

f.[2] Vent below pectorals. Labichthys

c.[2] Snout beak like, jaws applied against one another, much less than head, progressively contracted before eyes; caudal without filament.

g. Avocettinopsinae. Beak soft, flexible, less than 1/4 head; no teeth; gill openings clearly separated at throat; lateral line with row of large pores; pectoral well developed and rays in 2 rows; dorsal begins on head, well before anal.

Avocettinops

1966

g.[2] Serrivomerinae. Beak stiff, and firm, somewhat less than head; teeth present; gill opening partially confluent at throat; lateral line without pores; pectoral rudimentary, rays in single row; dorsal begins behind pectoral.

h.[1] All teeth minute, uniform, fine; anal begins somewhat opposite dorsal. Stemonidium

h.[2] Teeth strong, variable; vomerine teeth usually larger than maxillary; anal begins before dorsal.

i.[1] Vomerine teeth flattened, lanceolate, in 2 parallel rows which form crest or saw like plate on mouth roof.

Serrivomer

i.[2] Vomerine teeth pointed, conic, well separated, form single row on mouth roof.

1967

f.' Tail lanceolate; nostril in tube each side. Platuronides

f.² Tail slender; nostril without tube. Spinivomer

b.² Cyeminal. Body moderately long, depth 10; gill opening small, ventral; mouth cleft reaches middle of postorbital; snout snipe like beak, jaws long and slender, greater than head, abruptly contracted before eyes; teeth minute, fine; pectoral well developed; dorsal and anal posterior; caudal forked. Cyema

a.³ Alcockidiinae. No pectorals. Alcockidia

1968

Genus Hemichthys Richardson

Hemichthys Richardson, Voy. Samarang, Fishes, 1848, p. 25. Type Hemichthys scolopaceus Richardson, monotypic.

Leptorhynchus Lowe, Proc. Zool. Soc. London, 1850, p. 252. Type Leptorhynchus leuchtenbergii Lowe, monotypic.

Belonopsis Brandt, Mém. Acad. Sci. St. Petersbourg Sav. Etrang., 1854, p. 174. Type Leptorhynchus leuchtenbergii Lowe, monotypic.

Investigator Goode and Bean, Oceanic Ichth., 1895, p. 518. Type Hemichthys acanthonotus Alcock, orthotypic.

1969

Tilurella Roule, Compt. Rend. Acad. Sci. Paris, vol. 153, 1911, p. 732.

Atypic. Type Hemichthys scolopaceus Richardson.

Body exceedingly elongate, slender, tapers towards tail. Head rather stout. Jaws prolonged as slender straight bill, not expanded at tip. Eyes large. Jaws and vomer with small close set teeth, points directed backward. Tongue not free. Nostrils close together, near eye. Gill openings wide, extend down and forward, nearly confluent. No scales. Dorsal origin above

1970

gill opening. Anal origin close behind vent. Pectorals well developed. Vent below pectorals.

Bathypelagic in tropical seas.

1971

Xenichthys scolopaceus Richardson

Xenichthys scolopaceus Richardson, Voy. Samarang, Fishes, 1848, p. 25, pl. 10, figs. 1-3. South Atlantic.—Peters, Monatsb. Akad. Wiss. Berlin, 1876 (1877), p. 849 (north of New Guinea).—Goode and Bean, Bull. Essex Inst., 1879, p. 26 (George's Banks).—Goode, Proc. U. S. Nat. Mus., vol. , 1880, p. 488 ( ).—Jordan and Gilbert, Bull. U. S. Nat. Mus., no. 16, 1882, p. 366 (compiled).—Goode and Bean, Bull. Mus. Comp. Zool., vol. , 1883, p. 225 ( ).—Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889 (1892), p. 657 (compiled).—

1972

Goode and Bean, Oceanic Ichth., 1896, p. 152, pl. 46, fig. 170 (N. 37° to 41° W. 60° to 74°, 216 to 2369 fathoms). — Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47, pt. 1, 1896, p. 369 (compiled). — Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. , 1906, Tiefsee Fische, p. 126, pl. 9, fig. 1 (N. 16° 14' 1" W. 22° 38' 3", 1694 meters, Cape Verde Islands). — Roule, Ann. Inst. Océanogr. Monaco, vol. 1, fasc. 6, 1910, p. 1, pl. 1 ( ). — Grassi, Metamorf. Murenoid. Ric. sist. ecolog. Iéna, 1913, p. , pls. (Messina). — Weber and Beaufort, Fishes Indo Austral. Archipelago, vol. 3, 1916, p. 330,

1973

figs. 157–158 (compiled). — Caziot and Ismard, Bull. Soc. Zool. France, vol. 45, 1920, pp. 87, 88 (Nice). — Roule and Bertin, Bull. Mus. Hist. Nat. Paris, 1924, No. 1, p. 62 ( ). —

Barnard, Ann. South African Mus., vol. 21, pt. 1, June 1925, p. 198 (off Cape Point, 400 fathoms; Natal coast). — Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 41 (compiled). — Roule and Bertin, North Atl., Rep. Danish Dana Exped., No. 4, Sep. 1, 1929, p. 9, figs. 1–9 (Atlantic, Gulf of Mexico, Caribbean Sea, Gulf of Panama, to 6000 meters).

1974

Nemichthys scolopacea (Günther, Cat. Fishes Brit. Mus., vol. 8, 1870, p. 21 (type; Madeira); Rep. Voy. Challenger, vol. 22, 1883, p. 263 (type of Leptorhynchus leuchtenbergii). — Vaillant, Exped. Sci. Travailleur et Talisman, Poiss., 1888, p. 93, pl. 7, figs. 2-a (Banc d'Arguin, 888 meters).

Leptorhynchus leuchtenbergii Lowe, Proc. Zool. Soc. London, vol. 18, 1850, p. 252. Madeira.

Belonopsis leuchtenbergii Brandt, Mém. Acad. Sci. St. Petersbourg, Sav. Etrang., 1854, p. 174, pl.

1975

Hemichthys avocetta Jordan and Gilbert, Proc. U. S. Nat. Mus., vol. 3, 1880 (1881), p. 409. Harbor of Port Gamble, Puget Sound; vol. 4, 1881 ( ), p. 37 ( ). — Bean, Proc. U. S. Nat. Mus., vol. 4, 1881 ( ), p. 266 (Puget Sound). — Jordan and Gilbert, Bull. U. S. Nat. Mus., No. 16, 1882, p. 367 (compiled). — Günther, Rep. Voy. Challenger, vol. 22, 1887, p. 263 (compiled). — Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889 (1892), p. 657 (compiled). — Goode and Bean, Oceanic Ichth., 1895, p. 153 (reference). — Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47, pt. 1, 1896, p. 369 (compiled). —

1976

Roule and Bertin, Danish Dana Exped. North Atl., Rep. No. 4, Sep. 1, 1929, p. 7 (note).

Hemichthys acanthonotus Alcock, Journ. Asiatic Soc. Bengal, vol. 53, pt. 2, No. 2, 1892, p. 136. Bengal Bay, 475 fathoms); Illustrat. Zool. Investigator, Fishes, pt. 3, 1895, pl. 14, fig. 5 (type); Journ. Asiatic Soc. Bengal, vol. 65, pt. 2, 1896, p. 336 (reference); Cat. Deep Sea Fishes Indian Mus., 1899, p. 190 (Bay of Bengal, 475 fathoms; Arabian Sea, 636 fathoms).

Investigator acanthonotus Goode and Bean, Oceanic Ichth., 1895, p. 518 (reference).

1977

Hemichthys fronto Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 324, pl. 65, fig. 1. N. 7°31'30" W. 79°14', 458 fathoms; N. 25°29'30" W. 109°48', 1588 fathoms, off Panama.

Hemichthys mediterraneus Ariola, Ann. Mus. Civ. Stor. Nat. Genova, vol. 51, 1904, p. 156. Gulf of Genoa; Revista Pesc. Idrobiol. Pavia, vol. 8, pt. 15, 1913, p. 1.

depth 6 or 7 in head; head 11 3/5 to 12 1/2, width 6 1/2 to 8 in its length. Snout 1 2/5 to 1 1/2 in head; eye 9 1/5 to 12, 6 1/5 to 8 1/8 in snout, greater than interorbital; upper jaw slightly longer than lower; maxillary extends 2/5 to 1/2 eye diameter behind head, length 1 1/4 in head; teeth fine, with very short, low, sharp points, rough to touch, in bands in jaws and on vomer; interorbital over fore portion 1/2 of eye, concave. Gill opening 2/3 to 3/5 of eye,

interspace very narrow.

Lateral line distinct.

Dorsal begins 1/2 to 3/4 an eye diameter before gill opening, fin height 6 to 7 in head; anal higher, fin height 4 to 5; pectoral 5 1/5 to 5 1/2.

Broun, clouded with gray white. Iris dark gray. Under surface of head and gill openings blackish brown. Dorsal brownish. Anal neutral blackish. Pectoral brownish, whitish below and

1980

blackish terminally.

Atlantic, South Africa, Natal,
Arabian Sea, Bay of Bengal,
East Indies, Philippines,
Eastern Pacific.

1981

4121. D. 5365. Cape Santiago Light, N. 73° W., 6.7 miles (N. 13° 44' 24" E. 120° 45' 30"), Balayan Bay, Luzon. In 214 fathoms. February 22, 1909. Length 757 mm.

D. 5320. Ibugos Island (S. end) N. 81° W., 1.25 miles (N. 20° 19' 15" E. 121° 51' 20"). In 26 fathoms. November 9, 1908. Length 352 mm.

4141. D. 5621. Makyan Island (S.), N. 54° W., 3 miles (N. 0° 15' E. 127° 24' 35"), between Gilolo and Makyan Islands. In 298 fathoms. November 28, 1909. Length 280 mm., mandible broken.

10066. D. 5275. Malavatuan Island (N.), S. 71° E., 10.75 miles (N. 13° 55' 55" E. 120° 10' 15"), China Sea vicinity southern Luzon. In 117 fathoms. July 16, 1908. Length 428 mm.

D. 5646. North Island (S.), S. 68° E., 7.5 miles (S. 5° 31' 30" E. 122° 22' 40"), Buton Strait. In 456 fathoms. December 16, 1909. Length 408 mm.

1982

D. 5648. North Island (S.), N. 87° E., 10.2 miles (S. 5° 35' E. 122° 20'), Buton Strait. In 559 fathoms. December 16, 1909. Length 515 mm.

1 example. Philippines. Length 928 mm.

D. 5570. Simalue Island (SE.), S. 17° E., 5.7 miles (N. 5° 32' 15" E. 120° 12' 57"), north of Tawi Tawi. In 330 fathoms. September 22, 1909. Length 428 mm.

1983

Genus Nematoprora Gilbert

Nematoprora Gilbert, Bull. U. S. Fish Comm., vol. 23, pt. 2, 1903 (1905), p. 587.

Type Nematoprora polygonifera Gilbert, monotypic.

Body greatly elongate, compressed, tapers at both ends, constriction before anal very short and forms only very short trunk. Head extremely slender, but slightly deeper than neck. Eye small, just before last fourth in head. Jaws very slender, ends recurved. Mouth cleft extends but slightly behind eye. Teeth pavement like, with slightly rounded surfaces and arranged in oblique series. Nostrils round pores, hind one above and behind front one. Gill

1984

opening wide? Tail ends in long filament. Dorsal begins on nape little before gill opening. Pectoral short, broad.

1985

Hematoprora polygonifera Gilbert

Hematoprora polygonifera Gilbert,

Bull. U. S. Fish Comm., vol. 23, pt. 2, 1903 (1905), p. 587, fig. 234. Near Bird Island, 313 to 800 fathoms. — Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 42 (compiled).

1986

Genus Cercomitus Weber

Cercomitus Weber, Siboga Expedt., vol. 5-7, Fische, 1913, p. 54. Type Cercomitus flagellifer Weber, monotypic.

Body very slender, elongate, compressed, tapering each end with tail forming long filament. Head rather long, greatly exceeds very short trunk. Eyes high, upper edge in dorsal profile. Jaws narrow, tapering, equal, somewhat swollen at ends, upper strongly curved upwards. Jaws and vomer closely set with small teeth, points directed backward. Nostrils close together, somewhat before eye, rounded. Gill openings narrow, before and below pectorals. No scales. Dorsal begins little before pectoral. Anal begins little before end of pectoral.

1987

Cercomitus flagellifer Weber

Cercomitus flagellifer Weber, Siboga Expedt., vol. 57, Fische, 1913, p. 55, pl. 6, fig. 1. S. 8°4'.7E. 118°44'.3, 2060 meters, Flores Sea; S. 9°3'.4E. 119°7', 959 meters, Savu Sea. — Weber and Beaufort, Fishes Indo Austral. Archipelago, vol. 3, 1916, p. 328, fig. 156 (copied).

1988

Leptocephalus andreae Schmidt

Leptocephalus andreae Schmidt,
Videnskb. Medd. dansk. naturh. Foren.
Köbenhavn, vol. 64, 1912, p.

— Roule and Bertin, Danish Dana
Exped. Oceanogr. Rep., no. 4, Sep. 1, 1929,
pp. 68-81, figs. 41-47 (Gulf of Cadiz,
Morocco, Canaries, Cape Verde Islands,
west Atlantic, off Carolinas, Bermudas,
off Jamaica, Hayti, Porto Rico, Caribbean
Sea, Lesser Antilles, 25 to 1300 meters).
Leptocephalus camaricus Lea, Rep. Sci. Res.
Michael Sars, Bergen, vol. 3, pt. 1, Zool.,
1913, p. , pl.

1989

Leptocephalus curvirostris Strömman

Leptocephalus curvirostris Strömman,
Leptoceph. Univ. Zool. Mus. Upsala, 1896,
p. , pl. . Atlantic north of Porto
Rico. — Roule and Bertin, Danish
Dana Exped. Oceanogr. Rep., No. 4, Sep. 1,
1929, p. 61, fig. 37 (copied).

Tilurus curvirostris Pappenheim, Deutsch
Südpolar Exped., Zool., vol. 7, pt. 2, 1914,
p.

— Roule and Bertin, Danish Dana
Exped. Oceanogr. Rep., No. 4, Sep. 1, 1929,
p. 63, fig. 39 (copied).

1990

Leptocephalus tiluroides Strömman

Leptocephalus tiluroides Strömman,

Leptocep. Univ. Zool. Mus. Upsala, 1896,

p. , pl.

— Roule and Bertin, Danish Dana

Exped. Oceanogr. Rep., No. 4, Sep. 1, 1929, p.

62, fig. 38 (copied).

1991

Tiburella gaussiana Pappenheim

Tiburella gaussiana Pappenheim, Deutsch. Südpolar Exped., vol. 15, pt. 2, 1914, p. 187, pl. 10, figs. 3-a. S. 30° 21' W. 14° 2', 10 meters, south of St. Helena.

Tiburella a. Roule and Bertini, Danish Dana (Exped. Oceanogr.) Rep., no. 4, September 21, 1929, pp. 85-89, figs. 48-49. (west of Madeira, north of Cape Verde Islands, mid Atlantic, 100 to 600 meters).

Tiburella b. Roule and Bertini, Danish Dana Oceanogr. Exped. Rep., no. 4, September 21, 1929, pp. 89-91, figs. 51-52 (Canaries, between Madeira and Cape Verde Islands, mid Atlantic, 600 to 3000 feet).

Genus Labichthys Gill and Ryder

Labichthys Gill and Ryder, Proc. U. S. Nat. Mus., vol. 6, 1883 (1884), p. 261 (p. 255 name only).

Type Labichthys carinatus Gill and Ryder, designated by Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889 (1892), p. 655.

Avocettina Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889 (1892), p. 655.

Type Nemichthys infans Günther, orthotypic.

1993

Body exceedingly elongate, band shaped, tail tapering to point. Body depth at front third much less than in second third. Head nearly deep as wide. Snout produced into long slender bill, longer than mandible, tip of each with slight pad. Eye moderate, without orbital margin. Teeth in jaws and on vomer close set, points directed backward. Tongue not free. Gill openings rather wide, with narrow interspace where gill membrane fastens to

1994

isthmus. No scales. Lateral line formed by one series of pores. Dorsal origin close behind pectoral origin. Anal origin close behind vent. Vent far behind pectorals.

1985

Labichthys scapulorostris (Borodin)

Avocettina scapulorostris Borodin,
Proc. New England Zool. Club, vol. 10,
Jan. 22, 1929, p. 109. N. 41°29' W. 47°48',
800 fathoms.

Genus Bettastomella Facciolá

Bettastomella Facciolá, Bull. Soc. Zool. Ital. Roma, ser. 3, vol. 3, fasc. 1-4, 1914, p. 47.

Type Bettastomella phaiosoma Facciolá.

See (Indice dei Vertebrati ittioidi del mare di Portorico 1912) as a new type of Bettastomus

Though the two species admitted here differ as shown below, Garman has not given dimensions for his material.

Analysis of species

a.[1] Pectoral 1 1/3 in postocular; eye 4 in postocular. *bowersii*.

a.[2] Pectoral 1 1/4 in postocular; eye 2 1/3 in postocular. *infans*.

1997

Labichthys bowersi Garman

Labichthys bowersi Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 323, pl. 64, fig. 1. N. 6° to 10° W. 79° to 96°, 1168 to 2232 fathoms, off Panama.

1998

Labichthys infans (Günther)

Hemichthys infans Günther, Ann. Mag. Nat. Hist., ser. 5, vol. 2, 1878, p. 251. Mid Atlantic, 2500 fathoms; Rep. Voy. Challenger, vol. 22, 1887, p. 264, pl. 63, fig. B (type). — Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889 (1892), p. 655 (copied; north coast of Alaska). — Jordan and Evermann, Bull. U. S. Nat. Mus., no. 47, pt. 1, 1896, p. 367 (part; compiled). — Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15, Fische, 1906, p. 129, pl. 8, figs. 5–6 (N. 5°5'3" W. 13°27'

1999

5", 3070 meters, West Africa; S. 0° 39' 2" E. 98° 52' 3", 750 meters, off West Sumatra; S. 6° 19' 3" E. 73° 18' 9", 1900 meters, Chagos Archipelago; between Zanzibar and Gulf of Aden, 1668 to 2959 meters). — Roule and Bertin, Bull. Mus. Hist. Nat. Paris, vol. , 1924, No. 1, p. 63 ( ). — Barnard, Ann. South African Mus., vol. 21, pt. 1, 1925, p. 199 (off Cape Point, 480 to 630 fathoms).

~~Lacrattina infans Weber~~

2000

Labichthys infans Goode and Bean, Oceanic Ichth., 1895, p. 153, pl. 47, figs. 173-174 (compiled).

Avocettina infans Weber, Siboga Expedt., vol. 57, Fische, 1913, p. 53 (Flores Sea, 1600 meters; Molucca Passage, 1994 meters; Halmahera Sea, 827 meters; Banda Sea, 2477 meters). — Weber and Beaufort, Fishes Indo Austral. Archipelago, vol. 3, 1916, p. 334, figs. 161-162 (on preceding). — Roule and Bertin, Danish Dana Exped. Oceanogr. Rep., No. 4, Sep. 1, 1929, figs. 10-10 (Cape

Verde Islands, off Guiana, Lesser Antilles, mid Atlantic, Gulf of Panama, 800 to 5000 meters).

Labichthys carinatus Gill and Ryder, Proc. U. S. Nat. Mus., vol. 6, 1883 (1884), p. 253 (name only), fig. 255, 261, N. 41°13' W. 65°33'30", 906 fathoms. — Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889 (1892), p. 656 (compiled). — Goode and Bean, Oceanic Ichth., 1895, p. 153, pl. 46, fig. 171 (type). — Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47, pt. 1, 1896, p. 368 (compiled).

2002

Labichthys elongatus Gill and Ryder, Proc. U. S. Nat. Mus., vol. 6, 1883(1884), p. 262. N. 39° 22' W. 68° 34' 30", 1628 fathoms, Gulf Stream; vol. 6, 1883(1884), p. 255 (name only). — Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889(1892), p. 656 (compiled). — Goode and Bean, Oceanic Ichth., 1895, p. 453, pl. 46, fig. 172 (type). — Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47, pt. 1, 1896, p. 369 (compiled).

Labiichthys gilli Bean, Proc. U. S. Nat. Mus., vol. 13, 1890, p. 45. N. 55° 20' W. 136° 20', 1569 fathoms, east of Prince of Wales Island, Alaska.

depth 7 in head, head 7 2/5 in 2003?
rest of body to end of broken tail,
width 13 in its length. Snout 1 1/4
in rest of head, eye 15 2/3, 10 in
snout, greatly exceeds interorbital;
maxillary reaches very slightly
behind hind eye edge, reaches 1 1/4
in head; teeth minute asperous
bands on jaws and vomer, with very
short sharp points; interorbital
3/5 of eye. Gill opening equals eye,
interspace very narrow.

Lateral line distinct.

Dorsal origin opposite middle of depressed pectoral, fin head 5 1/3 in head; anal height 4 2/3; pectoral length 4 1/3; vent 3/5 of head length behind gill opening.

Blackish brown. Iris dark gray. Dorsal blackish. Anal white. Pectoral dusky, hind lower edge paler.

2005

D. 5544. Coronado Point, S. 37° W., 21.5 miles (N. 8° 16' 30" E., 122° 26' 30"), northern Mindanao and vicinity. Dn 759 fathoms. September 6, 1909. Length 165 mms.

4089. D. 5606. Dodepo Island (W.), N. 3° W., 10.8 miles (N. 0° 16' 28" E. 121° 33' 30"), Gulf of Tomini, Celebes. Dn 834 fathoms. November 17, 1909. Length 368 mm. to end of broken back.

D. 5634. Gomomo Island (E.), N. 41° E., 3 miles (S. 1° 54' E. 127° 36'), Pitt Passage. Dn 329 fathoms. December 3, 1909. Length 200 mm., with most of tail lost.

4139. D. 5587. Sipadan Island (W.), S. 12° E., 3.8 miles (N. 4° 10° 35" E. 118° 37' 12"), Sibuko Bay, Borneo. Dn 415 fathoms. September 28, 1909. Length 468 mm. to end of broken tail.

2006

Genus Avocettinops Roule and Bertin

Avocettinops Roule and Bertin, Danish Dana Exped. Oceanogr. Rep., No. 4, Sep. 1, 1929, p. 30. Type Avocettinops schmidti Roule and Bertin, orthotypic.

Body elongate, band like. Trunk at first and behind head with narrow collar. ~~Eye large.~~ Snout acuminate, little less than 1/3 of head. Eye large. Lower jaw shorter. Mouth cleft reaches hind eye edge. No teeth. Front nostril in rather long tube directed forward, falls about last third in snout. Hind nostril little posterior nearly level with upper eye edge. Gill opening in lower half of body depth. Lateral line single row of large pores. Dorsal begins little before gill opening. Pectorals well developed, each of 2 parallel rows of rays. Caudal present.

2007

Avocettinops schmidti Roule and Bertin.

Avocettinops schmidti Roule and Bertin, Danish Dana Exped. Oceanogr. Rep., No. 4, Sept. 1, 1929, p. 30, figs. 13–15. N. 23° 13' W. 82° 21', 1500 meters, off Cuba.

Genus Stemonidium Gilbert 2008

Stemonidium Gilbert, Bull. U. S. Fish Comm., vol. 23, pt. 2, 1903 (1905), p. 586.

Type Stemonidium hypomelas Gilbert, monotypic.

Body narrowly band shaped, trunk constricted and long tail tapering. Head longer than trunk. Jaws tapering to very slender weak tips. Eye small, little advanced in head. Teeth reduced to small granular plates, in quincunx in jaws and on vomer. Nostrils 2 short slits before middle of eye, posterior longer. Gill slits long, oblique, confluent bellow, membranes united and free from isthmus. Gills 4. No lateral line. Dorsal begins little before anal. Pectoral small.

2009

*Stemonidium hypomelas Gilbert

*Stemonidium hypomelas Gilbert,

Bull. U. S. Fish Comm., vol. 23, pt. 2, 1903

(1905), p. 586, pl. 67. Near Niihau Island,

537 to 672 fathoms. — Fowler, Mem.

Bishop Mus., vol. 10, 1928, p. 42 (compiled).

Genus Serrivomer Gill and Ryder

Serrivomer Gill and Ryder, Proc. U. S. Nat. Mus., vol. 6, 1883 (1884), p. 260. Type Serrivomer beanii Gill and Ryder, monotypic (p. 255 name only).

Body slender, elongate, moderately compressed, tapering from trunk to snout and to end of tail. Head rather long, pointed. Snout pointed, somewhat curved upward, not longer than rest of head. Eye above mouth angle. Jaws moderately attenuated, lower somewhat longer. Mouth cleft reaches behind eye. Teeth in front third of jaws small, compressed; in several rows, in second third larger, lancet shaped, depressible and uniserial, in last third small, less compressed. Vomerine teeth much larger, blade like,

alternating, crowded to appear as compressed serrate row. Gill openings wide, inferior, descend forward. Gill membranes united, joined to thin partition attaching them to isthmus. No scales. Vertical fins confluent. Dorsal origin behind anal origin, latter midway between pectoral and dorsal origins. Pectoral small, rather high. Vent at end of first or in front of second fourth of length.

Bathypelagic in tropical seas.

Serrivomer beanii Gill and Ryder

Serrivomer beanii Gill and Ryder, Proc. U. S. Nat. Mus., vol. 6, 1883 (1884), p. 260, N. 41°40'30" W. 65°28'30", 855 fathoms (p. 255 nomen nudum).— Goode and Bean, Oceanic Ichth., 1895, p. 155, pl. , fig. 175 (type).— Jordan and Evermann, Bull. U. S. Nat. Mus., no. 47, pt. 1, 1896, p. 367 (compiled).— Gilbert, Bull. U. S. Fish Comm., vol. 23, pt. 2, 1903 (1905), p. 586 (off Oahu, Bird Island, Kauai, 311 to 1067 fathoms).— Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 42 (compiled).

2013

Serrivomer beani Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889(1892), p. 653 (compiled). — Barnard, Ann. South African Mus., vol. 21, pt. 1, June 1925, p. 200 (south of Agulhas Banks, 560 fathoms).

Serrivomer richardi Vaillant, Exped. Sci. Travailleur et Talisman, Poiss., 1888, p. 385 (named base on p. 93). — Goode and Bean, Oceanic Ichth., 1895, p. 155 (compiled).

Avocettina richardi Jordan and Davis, Rep. U. S. Fish Comm., pt. 16, 1889 (1892), p. 655 (compiled).

2014

Nemichthys infans (not Günther) Vaillant, Exped. Sci. Travailleur et Talisman, Poiss., 1888, p. 93, pl. 7, figs. 1–1a (Azores, 2995 meters).

Nemichthys sector Garman, Mem. Mus. Comp. Zool., vol. 24, 1899, p. 320, fig. 63. N. 3° to 7° W. 79° to 86°, 134 to 1772 fathoms, off Guaymas. — Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 5, Fische, 1906, p. 132, pl. 8, fig. 4 (S. 26° 3' 6" E. 93° 43' 7", 2200 meters, between New Amsterdam and Sumatra; S. 10° 8' 2" E. 97° 14' 9", 2400 meters; S. 0° 58' 2" E. 99° 43' 2", 1280 meters, off west coast Sumatra; S. 4° 5' 8" E. 70° 16' 9", 2000 meters, west of Chagos Archipelago; N. 4° 36' 1" E. 48° 37' 6", 1213 meters, off North East Africa). —

Lloyd, Mem. Indian Mus., vol. 2, No. 3, 1909, p. 152 (Arabian Sea off Travancore, 930 fathoms). — Weber and Beaufort, Fishes Indo Austral. Archipelago, vol. 3, 1916, p. 332, figs. 159 to 160 (compiled). — Roule and Bertin, Danish Dana Exped. Oceanogr. Rep., No. 4, Sep. 1, 1929, p. 36, figs. 16-17, 25, 30 (Azores, Madeira, Canaries and Cape Verde Islands, off Guiana, Antilles, Cuba and Bahamas, off Carolines, Mid Atlantic, Gulf of Panama, 200 to 6000 meters).

Nerivomer sector type *brevidentatus*

2016

Roule and Bertin, Danish Dana Exped. Oceanogr. Rep., No. 4, Sep. 1, 1929, p. 39, figs. 18–21 (teeth).

Xerivomer sector type longidentatus

Roule and Bertin, Danish Dana Exped. Oceanogr. Rep., No. 4, Sep. 1, 1929, p. 40, figs. 22–24 (teeth).

As the two examples listed below are in very poor preservation I am unable to give satisfactory description of them.

D.5125. Togas Island (W.), S. 11° E., 24 miles (N. 10° 48' E. 121° 48' 30"), Sulu Sea, vicinity southern Panay. Dn 411 fathoms. February 3, 1908. Length 88 mm. [37]

D. 5287. Sombrero Island, N. 68° E., 11.25 miles (N. 13° 37' 40" E. 120° 39'), China Sea vicinity southern Luzon. Dn 379 fathoms. July 20, 1908. Length 123 mm. Both this and preceding poorly preserved.

2018

Genus Platuronides Roule and Bertin

Platuronides Roule and Bertin,
Danish Dana Exped. Oceanogr. Rep., no.
4, Sep. 1, 1929, p. 48. Type Platuronides
danae Roule and Bertin, orthotypic.

Body elongate, somewhat compressed,
trunk tapering posteriorly. Snout
beak like. Eye moderate, advanced.
Jaws strong and nearly equal.
Mouth cleft not reaching hind eye
edge. Maxillary and dominine teeth
pointed. Front nostril in short tube
directed forward, hind one between
its base and eye. Gill openings appear
united below throat. Lateral row
without row of pores. Dorsal begins
far behind pectorals, last rays
like those of anal little elevated
to form lancet end of tail, which
without filament.

2019

Platyuronides danae Roule and Bertin

Platyuronides danae Roule and Bertin,
Danish Dana Exped. Oceanogr. Rep., No. 4,
Sept. 1, 1929, p. 48, figs. 31–34. N. 25°35' W.
74°45', 1000 meters, north of Watling
Island, Bahamas.

2020

Genus Spinivomer Gill

Spinivomer (Gill and Ryder) Gill, Proc. U. S. Nat. Mus., vol. 6, 1883 (1884), p. 261.

Type Spinivomer goodei (Gill and Ryder) Gill, monotypic (p. 255 nomen nudum).

Body elongate, very slender. Eye small. Jaws very attenuated, mandibular rami deep. Median row of vomerine teeth conic. Branchial aperture nearly confluent. Tail filiform. Fin rays sheathed in tough membrane. Epidermis silvery.

Spinwomen

2021

Spiniwomer goodei Gill

Spiniwomer goodei (Gill and Ryder)

Gill, Proc. U. S. Nat. Mus., vol. 6, 1883 (1884), p. 261. N. 38°19'26" W. 68°20'20", 2361 fathoms, Gulf Stream (p. 255, name only). — Goode and Bean, Oceanic Ichth., 1895, p. 155 (copied). — Jordan and Evermann, Bull. U. S. Nat. Mus., no. 47, pt. 1, 1896, p. 367 (copied).

2022

Genus Cyema Günther

Cyema Günther, Ann. Mag. Nat. Hist., ser. 5, vol. 2, 1878, p. 251. Type Cyema atrum Günther, monotypic.

Body moderately elongate, trunk and tail subequal, hand like, soft. Snout and lower jaw produced, slender. Eye very small. Maxillary extends backwards far behind eye. Gill openings very narrow, close together on ventral surface. Suspensorium directed obliquely backwards. Vertebral 80. Vertical fins well developed, confined and interrupted at end of tail. Pectoral well developed. Vent median between gill openings and (short end of) tail.

2023

Cyema atrum Günther

Cyema atrum Günther, Ann. Mag. Nat. Hist., ser. 5, vol. 2, 1878, p. 251. Pacific and Antarctic Oceans, 1500 to 1800 fathoms; Rep. Voy. Challenger, vol. 22, 1887, p. 265, pl. 54, fig. d (type; Antarctic Ocean in 1800 fathoms). — Vaillant, Exped. Sci. Travailleur et Talisman, Poiss., 1888, p. 91, pl. 7, figs. 4–4a (off Morocco, 2210 meters). — Jordan and Davis, Rep. U. S. Fish

— Brauer, Deutsch. Tiefsee Exped. Valdivia, vol. 15, Tiefsee Fische, 1906, p. 131, pl. 8, fig. 3 (S. 3° 24' 6" E. 58° 38' 1", 2000 meters, Seychelles).

2023

Cyema atrum Günther

Cyema atrum Günther, Ann. Mag. Nat. Hist., ser. 5, vol. 2, 1878, p. 251. Pacific and Antarctic Oceans, 1500 to 1800 fathoms; Rep. Voy. Challenger, vol. 22, 1887, p. 265, pl. 54, fig. d (type; Antarctic Ocean in 1800 fathoms). — Vaillant, Exped. Sci. Travailleur et Talisman, Poiss., 1888, p. 91, pl. 7, figs. 4–4a (off Morocco, 2210 meters). — Jordan and Davis, Rep. U.S. Fish Comm., pt. 16, 1889 (1892), p. 154 (compiled). — Goode and Bean, Oceanic Ichth., 1895, p. 154, pl. 48, fig. 176 (compiled). —

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2024

Zugmayer, Res. Camp. Sci. Monaco, vol. 35, 1911, p. 85, pl. 4, fig. 4 (

— Vaillant, Res. Camp. Sci. Monaco, vol. 52, 1919, p. 135 ( ). —

Fowler, Mem. Bishop Mus., vol. 10, 1928, p. 41 (compiled). — Roule and Bertin, Danish Dana Exped: Oceanogr. Rep., No. 4, Sept. 1, 1929, p. 53, figs. 35–36 (Gulf of Cadiz; Morocco, Cape Verde, Guiana, mid Atlantic, Bahamas); fig. 56 (larvae from Gulf of Cadiz, Madeira, Cape Verde Islands, mid Pacific, west Atlantic, off Guiana).

2025

Genus Alcockidia Gilbert

Alcockidia Gilbert, Bull. U. S. Fish Comm., vol. 23, pt. 2, 1903 (1905), p. 586.

Type Gavialiceps microps Alcock, orthotypic.

Body greatly elongate, tail tapering. Vent about 1 snout length behind gill opening, near front end of long abdominal cavity. Eye small. Jaws form long slender bill. Sharp teeth on premaxillaries, vomer and dentaries. Gill openings close together wide. No lateral line. Dorsal feeble, scarcely evident, except posteriorly. Pectoral an inconspicuous knob, without any rays.

2026

Alcockidia microps (Alcock)

Gavialiceps microps Alcock, Ann. Mag. Nat. Hist., ser. 6, vol. 4, 1889, p. 46. Bay of Bengal, west of ten Degree Channel (between Andamans and Nicobars), 1045 fathoms; vol. 10, 1892, p. 364 (Station 126, 1370 fathoms; Station 128, 902 fathoms). — Goode and Bean, 1895, p. 156 (reference). — Alcock, Journ. Asiatic Soc. Bengal, vol. 65, pt. 2, 1896, p. 336 (reference); Cat. Deep Sea Fishes Indian Mus., 1899, p. 191 (Bay of Bengal off Andamans and Nicobars, 869 to

1045 fathoms; Arabian Sea off Laccadives, 1045 fathoms; Gulf of Manar, 902 fathoms)..